

What is claimed is:

1. 1. A method employed in an RF modem in dynamic assignment of a link address on an RF connection, the RF connection connecting the RF modem with a head end, the link address being used by the head end for forwarding of information from the head end through the RF modem to at least one host that is connected to the RF modem, the method comprising the steps performed in the RF modem of:
 6. receiving the link address, the link address being assigned by the head end;
 7. selecting a message that is carried on the RF connection based upon the link address; and
 8. forwarding the selected message to the at least one host.
1. 2. The method of claim 1, wherein the link address comprises an identifier for a frequency in the RF connection, the message being carried on the RF connection in an RF channel associated with the frequency.
1. 3. The method of claim 2, wherein the link address further comprises an identifier for a plurality of time periods, the message being carried on the RF cable connection in the RF channel during at least one time period of the plurality of time periods.
1. 4. The method of claim 3, wherein each time period of the plurality of time periods is relative to the start of a frame that is repetitively transmitted on the RF channel.
1. 5. The method of claim 4, wherein the link address further comprises an identifier that is matched with information in a header of the message before the message is forwarded to the at least one host.
1. 6. The method of claim 2, wherein the link address further comprises an identifier that is matched with information in a header of the message before the message is forwarded to the at least one host.

- 1 7. The method of claim 1, further comprising the steps of:
 - 2 determining that the forwarding of information from the head end through the RF
 - 3 modem to the at least one host has terminated; and
 - 4 releasing the link address to the head end responsive to determining that the
 - 5 forwarding of information has terminated.
- 1 8. The method of claim 7, wherein the releasing step further comprises sending a DHCP
- 2 (Dynamic Host Configuration Protocol) packet from the RF modem to the head end.
- 1 9. The method of claim 1, wherein the link address is received over a bidirectional link
- 2 during the receiving step.
- 1 10. The method of claim 9, wherein the bidirectional link is a PSTN (Public Switched
- 2 Telephone Network) link that is different from the RF connection.
- 1 11. The method of claim 1, wherein the received link address is received in a DHCP
- 2 (Dynamic Host Configuration Protocol) packet.
- 1 12. An apparatus for obtaining a dynamic assignment of a link address in an RF modem, the
- 2 RF modem connected to a head end over an RF connection, the link address being used
- 3 by the head end for forwarding of information from the head end through the RF modem
- 4 to at least one host that is connected to the RF modem, the apparatus comprising:
 - 5 logic configured to receive the link address, the link address being assigned by
 - 6 the head end;
 - 7 logic configured to select a message that is carried on the RF connection based
 - 8 upon the link address; and
 - 9 logic configured to forward the selected message to the at least one host.
- 1 13. The apparatus of claim 12, wherein the link address comprises an identifier for a
- 2 frequency in the RF connection, the message being carried on the RF connection in an RF
- 3 channel associated with the frequency.

- 1 14. The apparatus of claim 13, wherein the link address further comprises an identifier for a
2 plurality of time periods, the message being carried on the RF cable connection in the RF
3 channel during at least one time period of the plurality of time periods.
- 1 15. The method of claim 14, wherein each time period of the plurality of time periods is
2 relative to the start of a frame that is repetitively transmitted on the RF channel.
- 1 16. The apparatus of claim 15, wherein the link address further comprises an identifier that is
2 matched with information in a header of the message before the message is forwarded to
3 the at least one host.
- 1 17. The apparatus of claim 13, wherein the link address further comprises an identifier that is
2 matched with information in a header of the message before the message is forwarded to
3 the at least one host.
- 1 18. The apparatus of claim 12, further comprising:
2 logic configured to determine that the forwarding of information from the head
3 end through the RF modem to the at least one host has terminated; and
4 logic configured to release the link address to the head end responsive to
5 determining that the forwarding of information has terminated.
- 1 19. The apparatus of claim 18, wherein the logic configured to release the link address
2 further comprises logic configured to send a DHCP (Dynamic Host Configuration
3 Protocol) packet from the RF modem to the head end.
- 1 20. The apparatus of claim 12, wherein the logic configured to receive the link address is
2 further configured to receive the link address over a bidirectional link.
- 1 21. The apparatus of claim 20, wherein the bidirectional link is a PSTN (Public Switched
2 Telephone Network) link that is different from the RF connection.
- 1 22. The apparatus of claim 12, wherein the logic configured to receive a link address is
2 further configured to receive the link address in a DHCP (Dynamic Host Configuration
3 Protocol) packet.